**Staphylococcus aureus, Strain N315**

**Catalog No. NR-45898**

For research use only. Not for human use.

**Contributor:**
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**Manufacturer:**
BEI Resources

**Product Description:**

<table>
<thead>
<tr>
<th>Bacteria Classification</th>
<th>Staphylococcaceae, Staphylococcus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Species:</strong></td>
<td>Staphylococcus aureus</td>
</tr>
<tr>
<td><strong>Strain:</strong></td>
<td>N315</td>
</tr>
<tr>
<td><strong>NARSA Catalog Number:</strong></td>
<td>NRS70</td>
</tr>
<tr>
<td><strong>Original Source:</strong></td>
<td>Staphylococcus aureus (S. aureus), strain N315 was isolated in 1982 from a pharyngeal smear of a patient in Japan.</td>
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</tbody>
</table>
| **Comments:** S. aureus, strain N315 is a methicillin-resistant S. aureus (MRSA) strain. S. aureus, strain N315 was deposited as resistant to clindamycin, erythromycin and spectinomycin; positive for mec (subtype II); pulsed-field type USA100; MLST sequence type (ST) 5; eGenomic spa type 2, eGenomic spa repeats TJMBMDMGMK; Ridom spa type 1002; agr group II.³ It also has a large variety of virulence factors.³ S. aureus, strain N315 is a USA100 isolate. USA100 isolates have the same MLST profile (ST 5) and SCCmec (subtype II) and are usually resistant to β-lactams, erythromycin and spectinomycin as well as being multiresistant to other commonly used therapeutic agents. USA100 is the most prevalent U.S health care-associated pulse-field type and is endemic in many U.S. hospitals.³ The complete genome sequence of S. aureus, strain N315 is available (GenBank: BA000018.3). It is the representative genome for S. aureus. Note: Methicillin is no longer clinically used, however, the term methicillin-resistant Staphylococcus aureus (MRSA) continues to be used to describe S. aureus strains resistant to all penicillins.
| **S. aureus is a Gram-positive, cluster-forming coccus that normally inhabits human nasal passages, skin and mucus membranes. It is also a human pathogen and causes a variety of pus-forming infections as well as food-poisoning and toxic shock syndrome. In 1961, two years after the introduction of methicillin, a penicillinase-resistant penicillin, S. aureus developed methicillin-resistance due to acquisition of the mecA gene. For the last forty-five years hospital-acquired (HA) MRSA strains have disseminated worldwide. More recently, MRSA strains have been isolated that are not hospital acquired and are referred to as community-associated (CA) MRSA. These CA-MRSA strains differ phenotypically and genotypically from HA-MRSA strains and they are more frequently recovered from skin and soft tissue sources rather than post-operative wounds.⁴,⁵ |

**Material Provided:**

Each vial contains approximately 0.5 mL of bacterial culture in Tryptic Soy broth supplemented with 10% glycerol.

**Note:** If homogeneity is required for your intended use, please purify prior to initiating work.

**Packaging/Storage:**

NR-45898 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

**Growth Conditions:**

**Media:**

Brain Heart Infusion broth or Tryptic Soy broth or equivalent
Brain Heart Infusion agar or Tryptic Soy agar with 5% defibrinated sheep blood or equivalent

**Incubation:**

Temperature: 37°C
Atmosphere: Aerobic

**Propagation:**

1. Keep vial frozen until ready for use, then thaw.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tube, slant and/or plate at 37°C for 18 to 24 hours.

**Citation:**

Acknowledgment for publications should read “The following reagent was provided by the Network on Antimicrobial Resistance in Staphylococcus aureus (NARSA) for distribution by BEI Resources, NIAID, NIH: Staphylococcus aureus, Strain N315, NR-45898.”

**Biosafety Level:**

2


**Disclaimers:**

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References:
2. NARSA, NRS70.

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